

AMENDMENTS TO AND LISTING OF THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

Please amend the claims as follows:

1-73. (Canceled)

74. (Currently amended) A recombinant recognition molecule comprising variable heavy (VH) and variable light (VL) antibody framework sequences and complementarity determining regions (CDRs) comprising the amino acid sequences set forth in

- (i) the amino acid sequence SEQ ID NO. 1,
 - (ii) the amino acid sequences SEQ ID NO. 2 or 3,
 - (iii) the amino acid sequence SEQ ID NO. 4, 5 or 6,
 - (iv) the amino acid sequence SEQ ID NO. 7 or 8 or 9,
 - (v) the amino acid sequence SEQ ID NO. 10 or 11, and
 - (vi) the amino acid sequence SEQ ID NO. 12 or 13,
- and which specifically binds to the core 1 antigen.

75. (Canceled)

76. (Currently amended) The recombinant recognition molecule according to claim 74, wherein the antibody framework sequences

- a) FRH1, FRH2, FRH3 and FRH4 for the variable heavy chain VH are the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRH1 in position	1	Q or E
	2	V
	3	Q, K or T
	4	L
	5	K or V

6	E or Q
7	S
8	G
9	A
10	E
11	L or V
12	V or K
13	R or K
14	P
15	G
16	T or A
17	S
18	V
19	K
20	I or V
21	S or P
22	C
23	K
24	A, V, S or T
25	S
26	G
27	Y, F, S or D
28	T
29	F, L or I
30	T
for FRH2 in position	36 W
	37 V
	38 K or R
	39 Q
	40 R or A

	41	P
	42	G
	43	H or Q
	44	G
	45	L
	46	E
	47	W or R
	48	I or M
	49	G
for FRH3 in position	66	K or R
	67	A or V
	68	T
	69	L or M
	70	T
	71	A, L or T
	72	D
	73	T
	74	S
	75	S or T
	76	S
	77	T
	78	A
	79	Y
	80	M
	81	Q or E
	82	L
	82a	S
	82b	S or R
	82c	L
	83	T or R

	84	S
	85	E
	86	D
	87	S or T
	88	A
	89	V
	90	Y
	91	F or <u>Y</u> [[y]]
	92	C
	93	A
	94	Y, K or R
for FRH4 in position	103	W
	104	G
	105	Q
	106	G
	107	T
	108	T, S or L
	109	V or L
	110	T
	111	V
	112	S
	113	S or A

b) FRL1, FRL2, FRL3 and FRL4 for the variable light chain VT, are the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRL1 in position	1	D
	2	I, V or L
	3	Q or L
	4	M

5	T
6	Q
7	T or S
8	P
9	L
10	S
11	L
12	P
13	V
14	S or T
15	L or P
16	G
17	D or E
18	Q or P
19	A
20	S
21	I
22	S
23	C
for FRL2 in position	35 W
	36 Y
	37 L
	38 Q
	39 K
	40 P
	41 G
	42 Q
	43 S
	44 P
	45 K or Q

	46	L
	47	L
	48	I or V
	49	Y
for FRL3 in position	57	G
	58	V
	59	P
	60	D
	61	R
	62	F
	63	S
	64	G
	65	S
	66	G
	67	S
	68	G
	69	T
	70	D
	71	F
	72	T
	73	L
	74	K
	75	I
	76	S
	77	R
	78	V
	79	E
	80	A
	81	E
	82	D

	83	L or V
	84	G
	85	V
	86	Y
	87	Y
	88	C
for FRL4 in position	98	F
	99	G
	100	G or Q
	101	G
	102	T
	103	K
	104	L
	105	E
	106	I or L
	106a	K
	107	R
	108	A.

77. (Currently amended) The recombinant recognition molecule according to claim 74, wherein the recognition molecule comprises a combination of sequences SEQ ID Nos. 46 and 80, or SEQ ID Nos. 47 and 81, or SEQ ID Nos. 48 and 80, or SEQ ID Nos. 50 and 80, or SEQ ID Nos. 53 and 82, or SEQ ID Nos. 52 and 83, or SEQ ID Nos. 55 and 83, or SEQ ID Nos. 54 and 80, or SEQ ID Nos. 51 and 83, or SEQ ID Nos. 49 and 80, or SEQ ID Nos. 56 and 90, or SEQ ID Nos. 57 and 90, or SEQ ID Nos. 57 and 86, or SEQ ID Nos. 58 and 87, or SEQ ID Nos. 56 and 91, or SEQ ID Nos. 59 and 91, or SEQ ID Nos. 60 and 87, or SEQ ID Nos. 61 and 90, or SEQ ID Nos. 56 and 88, or SEQ ID Nos. 56 and 85, or SEQ ID Nos. 59 and 90, or SEQ ID Nos. 62 and 90, or SEQ ID Nos. 59 and 86, or SEQ ID Nos. 74 and 92, or SEQ ID Nos. 63 and 87, or SEQ ID Nos. 74 and 87, or SEQ ID Nos. 74 and 89, or SEQ ID Nos. 74 and 85, or SEQ ID Nos. 64 and 86, SEQ ID Nos. 74 and 86, or SEQ ID Nos. 63 and 86, or SEQ ID Nos. 65 and 85, or

SEQ ID Nos. 65 and 86, or SEQ ID Nos. 66 and 85, or SEQ ID Nos. 67 and 87, or SEQ ID Nos. 68 and 86, or SEQ ID Nos. 72 and 88, or SEQ ID Nos. 69 and 90, or SEQ ID Nos. 70 and 90, or SEQ ID Nos. 69 and 92, or SEQ ID Nos. 73 and 86, or SEQ ID Nos. 69 and 89, or SEQ ID Nos. 71 and 92, or SEQ ID Nos. 56 and 86, or SEQ ID Nos. 65 and 92.

78. (Currently amended) The recombinant recognition molecule according to claim 74, wherein said recognition molecule is a single-chain antibody fragment, a multibody, a Fab fragment, a fusion protein of an antibody fragment with peptides or proteins and/or an immunoglobulin of the IgG, IgM, IgA, IgE, IgD isotypes and/or subclasses thereof.

79. (Currently amended) A construct comprising the recombinant recognition molecules according to claim 74, further comprising (i) immunoglobulin domains of various species, (ii) enzyme molecules, (iii) inter-action. domains, (iv) domains for stabilization, (v) signal sequences, (vi) fluorescent dyes, (vii) toxins, (viii) catalytic antibodies, (ix) one or more antibodies or antibody fragments with different specificity, (x) cytolytic components, (xi) immunomodulators, (xii) immunoeffectors, (xiii) MHC class I or class II antigens, (xiv) chelating agents for radioactive labeling ~~labelling~~, (xv) radioisotopes, (xvi) liposomes, (xvii) transmembrane domains, (xviii) viruses and/or (xix) cells.

80. (Currently amended) A method for the production of recombinant recognition molecules according to claim 74, comprising

incorporating in a host cell one or more polynucleotides which encode the polypeptide sequences set forth in

- (a) the amino acid sequence SEQ ID NO:1,
- (b) the amino acid sequence SEQ ID NO: 2 or 3,
- (c) the amino acid sequence SEQ ID NO: 4, 5 or 6,
- (d) the amino acid sequence SEQ ID NO: 7 or 8 or 9,
- (e) the amino acid sequence SEQ ID NO: 10 or 11, and
- (f) the amino acid sequence SEQ ID NO: 12 or 13,

culturing the host cells under suitable conditions for the expression of said polypeptides;

and

obtaining the recognition molecule.

81. (Currently amended) A method for the prophylaxis, diagnosis, reduction, therapy, follow-up or aftercare of a core-1 positive tumor disease or a core-1 positive metastasis, comprising administering to a subject in need thereof, a recognition molecule ~~according to claim 74~~ comprising variable heavy (VH) and variable light (VL) antibody framework sequences and complementarity determining regions (CDRs) comprising the amino acid sequences set forth in

- (i) the amino acid sequence SEQ ID NO. 1,
- (ii) the amino acid sequences SEQ ID NO. 2 or 3,
- (iii) the amino acid sequence SEQ ID NO. 4, 5 or 6,
- (iv) the amino acid sequence SEQ ID NO. 7 or 8 or 9,
- (v) the amino acid sequence SEQ ID NO. 10 or 11, and
- (vi) the amino acid sequence SEQ ID NO. 12 or 13,

and which specifically binds to the core 1 antigen.

82. (Currently amended) The method according to claim 81, wherein the recognition molecule is a ~~non-labeled~~ labelled recognition molecule, which is an IgM or IgG or is a molecule derived therefrom.

83. (Previously presented) The method according to claim 81, wherein the recognition molecules are multibody.

84. (Previously presented) A method for the prophylaxis, diagnosis, reduction, therapy, follow-up or aftercare of a core-1 positive tumor disease or a core-1 positive metastasis, comprising administering to a subject in need thereof, a construct according to claim 79.